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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/537,914

06/08/2005

Hajime Ohata

2005_0875A

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7590

12/01/2006

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EXAMINER

FLANIGAN, ALLEN J

ART UNIT

PAPER NUMBER

3744

DATE MAILED: 12/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/537,914

Applicant(s)

OHATA ET AL.

Examiner

Allen J. Flanigan

Art Unit

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12 and 19-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12 and 19-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer et al. in view of Halstead et al.

The Examiner indicated previously that it would have been obvious to one of ordinary skill in the art at the time the instant invention was made to select appropriate wall thicknesses for the extruded manifold embodiment suggested in Fischer et al. Halstead et al. teach a multichamber extruded header which, unlike Fischer et al., is designed to confine two distinct fluids (engine coolant and refrigerant, for example) They indicate:

Also a similar feature of an extruded tank 60 is that the extrusion die can form different thickness walls, e.g., a header wall portion 58a for containing the pressure in refrigerant chamber 66 can be thicker than the header wall portion 58b for containing the lower pressure in the coolant chamber 64. For example the condenser side header wall thickness could be in the order of 1.5 times the thickness of the header wall portion 58b, which in one representative proposal is a header thickness for the radiator side of 2 mm and is a condenser side header wall thickness of 3 mm. Suitable materials for containing such pressures at such thicknesses includes 3003 aluminum alloys with a plasma sprayed coating of anyone of 4343, 4045, 4047 silicon aluminum alloy which is only sprayed onto the external header surface from 3 to 10% of the header wall thickness. This material and thickness of walls are only illustratively included herein with it being understood that **other extrudable materials and thicknesses of header material are contemplated** within the invention as set-forth in the appended claims.

(emphasis added)

Thus, it is clearly within the level of ordinary skill in the art to tailor the wall thickness of a header to the parameters of an application, as Halstead et al. make explicit.

Claims 12, 19, 22, and 23 rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer et al. in view of Halstead et al. and Gowan et al.

Gowan et al. shows an extruded, multichamber header for a heat exchanger in which the partition is shown to be comparable in thickness to the outer container wall of the manifold. As indicated previously, while the folded sheet metal embodiment of Fischer et al. will necessarily have a center partition in the manifold twice as thick as the sheet thickness forming the outer wall (absent any thinning treatment), Fischer et al. expressly suggest that the manifold can be formed by extrusion, and in such an instance the wall thickness could be selected as desired. Gowan et al. show that it is known in extruded headers to form the partition of comparable thickness to the outer wall, and it would have been obvious to one of ordinary skill in the art at the time the instant invention was made to form the center partition in Fischer et al.'s extruded embodiment in this manner to minimize weight (the extra thickness would serve no function nor offer any convenience in assembly as the folded over partition does in the Fig. 1 embodiment).

As for the limitations regarding wall thickness values, please see the comments made above in the rejection of claims 20 and 21.


Applicant's arguments with respect to claims 12 and 19-23 have been considered but are moot in view of the new ground(s) of rejection.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Suguwara et al. show a header tube with wall thickness of 1.5 mm.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen J. Flanigan whose telephone number is (571) 272-4910. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Allen J. Flanigan
Primary Examiner
Art Unit 3744

AJF